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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/602,187	06/12/2000	Christopher S. Pedicini	01446-1350	7985

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EXAMINER	
WILLS, MONIQUE M	

ART UNIT	PAPER NUMBER
1746	9

DATE MAILED: 11/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

CLO 9

Office Action Summary	Application No.	Applicant(s)	
	09/602,187	PEDICINI, CHRISTOPHER S.	
	Examiner	Art Unit	
	Wills M Monique	1746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 July 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4-10,14-20 and 44-53* is/are pending in the application.

4a) Of the above claim(s) *1-3,11-13 and 21-43* is/are withdrawn from consideration.

5)☒ Claim(s) *6-10,16-20 and 49-53* is/are allowed.

6)☒ Claim(s) *4,5,14,15 & 44-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 June 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

Claims 1-3 &11-13, 21-43 are withdrawn. Claims 1-3,21-32 & 41-43 being drawn to a nonelected gas mover system, claims 11-13 being drawn to a nonelected method for moving air and claims 33-40 being drawn to a nonelected method of admitting air are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as, there being no allowable generic or linking claim. Election was made **with** traverse in Paper No. 8.

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. Specifically, U.S. Patents 5,641,588 and 5,569,551 have not been cited on the information disclosure statements.

International Search Report

The WO 99/16145 document cited as an "X" on the International Search Report does not when taken alone teach the instant invention. The reference teaches an air mover system wherein air is moved by a fan but is silent to air being moved by a ferromagnetic diaphragm or electrically active diaphragm. Further, the relevant claims were withdrawn from consideration due to restriction requirement.

The WO 00/38266 document cited as an "X" on the International Search Report does not when taken alone teach the instant invention because it does antedate the instant application, and therefore does not qualify as prior art. The U.S. priority document U.S. Patent 6,274,261 teaches an air mover system, but is silent to a ferromagnetic diaphragm and does not pass current through an electrically active diaphragm required by the subject invention.

The WO 00/36696 document cited as an "X" on the International Search Report does not when taken alone teach the instant invention because it does antedate the instant application, and therefore does not qualify as prior art. The U.S. priority document U.S. Patent 6,475,658 teaches an air mover system that anticipates claim 4, but does not when taken alone teach the remaining claims 5,6, 7-10, 44-48 and 59-63 because it is silent to a ferromagnetic plate attached to the resilient diaphragm (claim 5), a resilient ferromagnetic material forming the diaphragm (claim 6). The reference is

also silent to the diaphragm completing a circuit (claim 7-10 and 59-53) and passing current through the diaphragm to deform it (claims 44-48 and 59-63).

Specification

The abstract of the disclosure is objected to because it is too long. The abstract should be no more than 150 words or 15 lines. Correction is required. See MPEP § 608.01(b).

Allowable Subject Matter

Claims 7-10 & 17-20 are allowable over the prior art of record because the prior art is silent to a system comprising a pair of contacts in a circuit, one contact being connected to a diaphragm and said contacts being closed when current flow through a coil is less than a predetermined level such that the presence of current flow through the coil greater than a predetermined level moves the diaphragm, breaking the circuit, de-energizing the coil, and allowing the resiliency of the diaphragm to return the diaphragm to the original position and remaking the circuit.

Claims 49-53 are allowable over the prior art of record because the prior art is silent to system comprising a pair of contacts in a circuit, one contact being connected to an electrically activated diaphragm and said contacts being closed when current flow through the electrically activated diaphragm is less than a predetermined level such that

the presence of current flow through said diaphragm greater than said predetermined level deforms the diaphragm, breaking the circuit, de-energizing the diaphragm, and allowing the diaphragm to return to the original position and remaking the circuit.

Claims 6 and 16 are allowable over the prior art of record, because the prior art is silent to a system comprising a resilient ferromagnetic diaphragm formed from a resilient ferromagnetic material, such that the resiliency of said diaphragm returns said diaphragm to the original position when an electrical current no longer passes through a coil.

The prior art, such as Rao 5,607,292 teaches a rigid ferromagnetic disk that is moved by current through a proximate coil. An electrometric spring is used as a resilient member to return the diaphragm to its original position when an electrical current no longer passes through said coil (see column 4, lines 15-54). Thus, the reference is silent to the resiliency of the diaphragm returning the diaphragm to the original position when an electrical current no longer passes through said coil. Therefore, the reference is patentably distinct from the subject invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 4 & 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Pedicini et al. U.S. Patent 6,475,658.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Pedicini teaches a resilient ferromagnetic diaphragm formed of a resilient diaphragm material including a thermoplastic elastomer (TPE) such as SANTOPRENE® and thermoplastic rubber available from Advanced Elastomer Systems (col. 6, lines 50-60). A magnet 48 is attached to the resilient diaphragm material (col. 6, lines 14-17) and is inherently ferromagnetic, forming a resilient ferromagnetic diaphragm. A coil 44 is positioned in proximity to the diaphragm (46 & 48) (Fig. 1). Current is passed through

the coil in a manner required to reciprocate the diaphragm (col. 6, lines 35-36). The diaphragm is made from the same material as the subject invention disclosed on page 16, lines 10-15 of applicants disclosure, therefore, the resiliency of said diaphragm inherently returns the diaphragm to the original position when an electrical current no longer passes through said coil. Therefore, the instant claim is anticipated by Pedicini.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 4, 5 & 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Cook et al. U.S Patent 5,599,174.

Cook teaches a resilient ferromagnetic diaphragm made from a flexible diaphragm material 10 mounted in a housing 11 for reciprocating motion in a direction normal to the plane of the diaphragm (col. 2, lines 25-30) and a plate like permanent magnet (col. 2, lines 55-60) bonded to the flexible diaphragm material (col. 2, lines 35-45). The magnet is permanently magnetized and therefore, inherently ferromagnetic. A coil is positioned in proximity to said diaphragm and alternating current flowing through the coil causes the diaphragm to move (col. 3, lines 30-35). The structure of the

diaphragm in the housing 11 inherently allows the resiliency of said diaphragm to return to the original position when an electrical current no longer passes through said coil.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 44-46 are rejected under 35 U.S.C. 102(b) as being anticipated by Sullivan U.S. Patent 5,185,549.

Sullivan teaches an electrically activated diaphragm comprising a resilient backing 11, a piezoelectric film 12 and first and second electrodes (5,4). See column 2, lines 60-68. An electric current source passes electrical current through the electrodes of the diaphragm causing the diaphragm to move (col. 3, lines 1-15). The diaphragm returns to the original position when an electrical current no longer passes through said diaphragm (col. 3, lines 5-15 and Fig. 1). Further, the resilient backing means 11 is composed of any suitable material to impart the proper tension and/or resiliency to the piezoelectric film (col. 3, lines 60-65).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan U.S. Patent 5,185,549, as applied to claim 44 above, in view of Dausch et al. U.S. Patent 6,359,374.

Sullivan teaches a diaphragm system as described hereinabove, including a piezoelectric material attached to one side of a resilient diaphragm.

The reference is silent to said diaphragm comprising an electrostatic material

Daush teaches the equivalence of electrostatic and piezoelectric material as diaphragm actuators (col. 1, lines 45-55).

Therefore, because these two diaphragm materials were art recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute electrostatic material for piezoelectric material.

Conclusions

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (703) 305-0073. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Randy Gulakowski, may be reached at 703-308-4333.

The unofficial fax number is (703) 305-3599. The Official fax number for non-final amendments is 703-872-9310. The Official fax number for after final amendments is 703-872-9311.

Mw

11/11/03

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